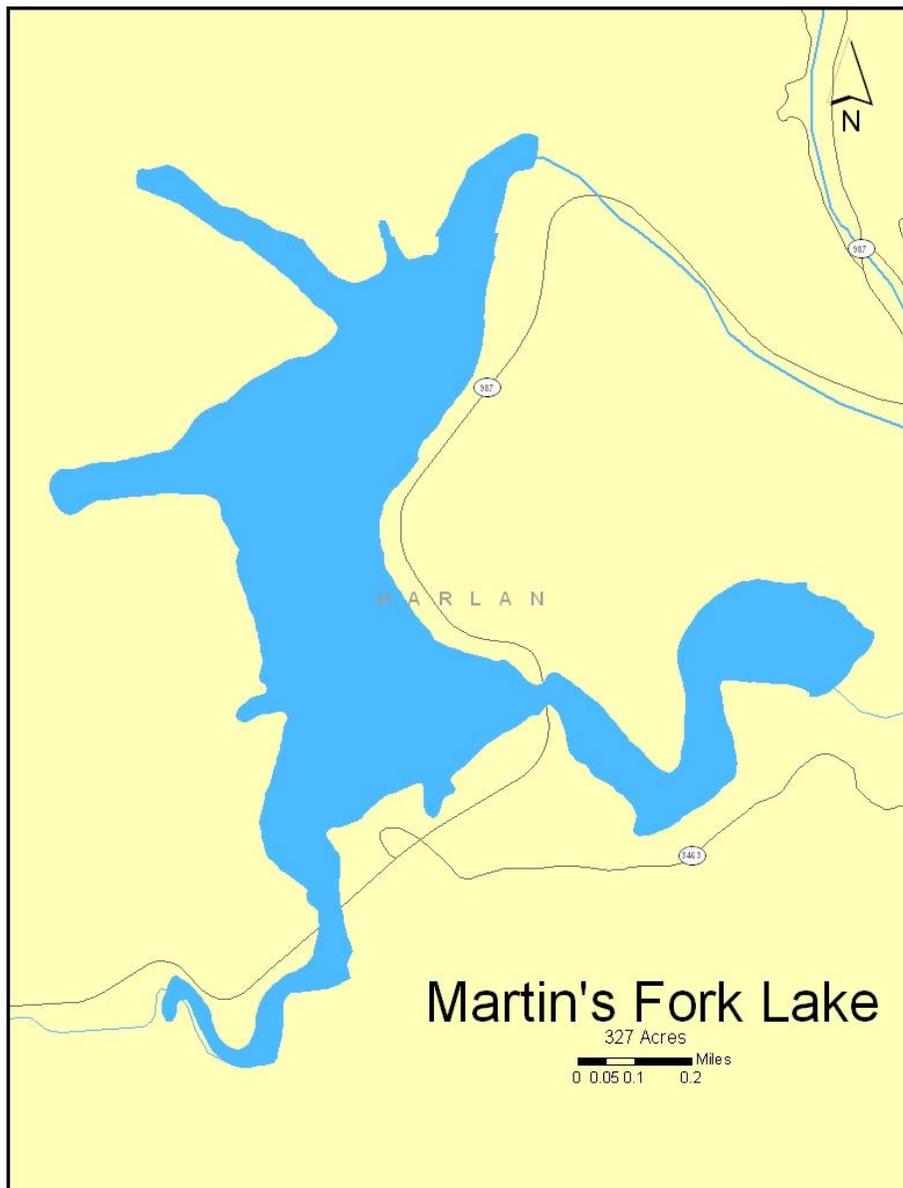


Martin's Fork Lake Bass Assessment 2019

Martin's Fork Lake is a 334-acre multipurpose reservoir on Martin's Fork of the Cumberland River in Harlan County. Martin's Fork Lake is the only lake in Kentucky that offers anglers an opportunity to catch four species of black bass: largemouth, smallmouth, spotted, and Coosa. This lake also offers fishing for channel catfish, white crappie, bluegill and native strain walleye. The following graphs show trends and rankings for each of the five population parameters used in the largemouth bass assessment.

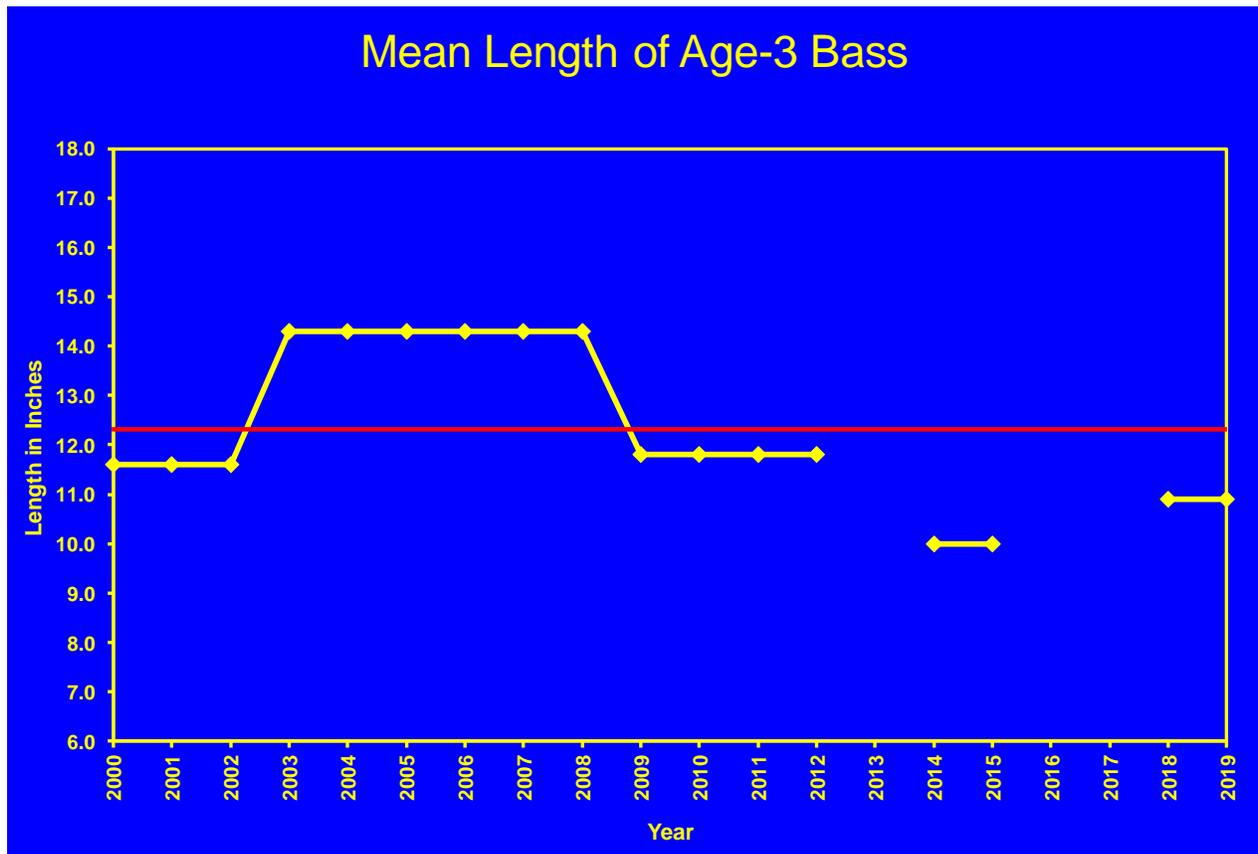
Please see the [Sportfish Assessments](#) page for an explanation of how the assessment works and for a list of other lakes with largemouth bass assessments.

The bass population is under statewide fishing regulations.



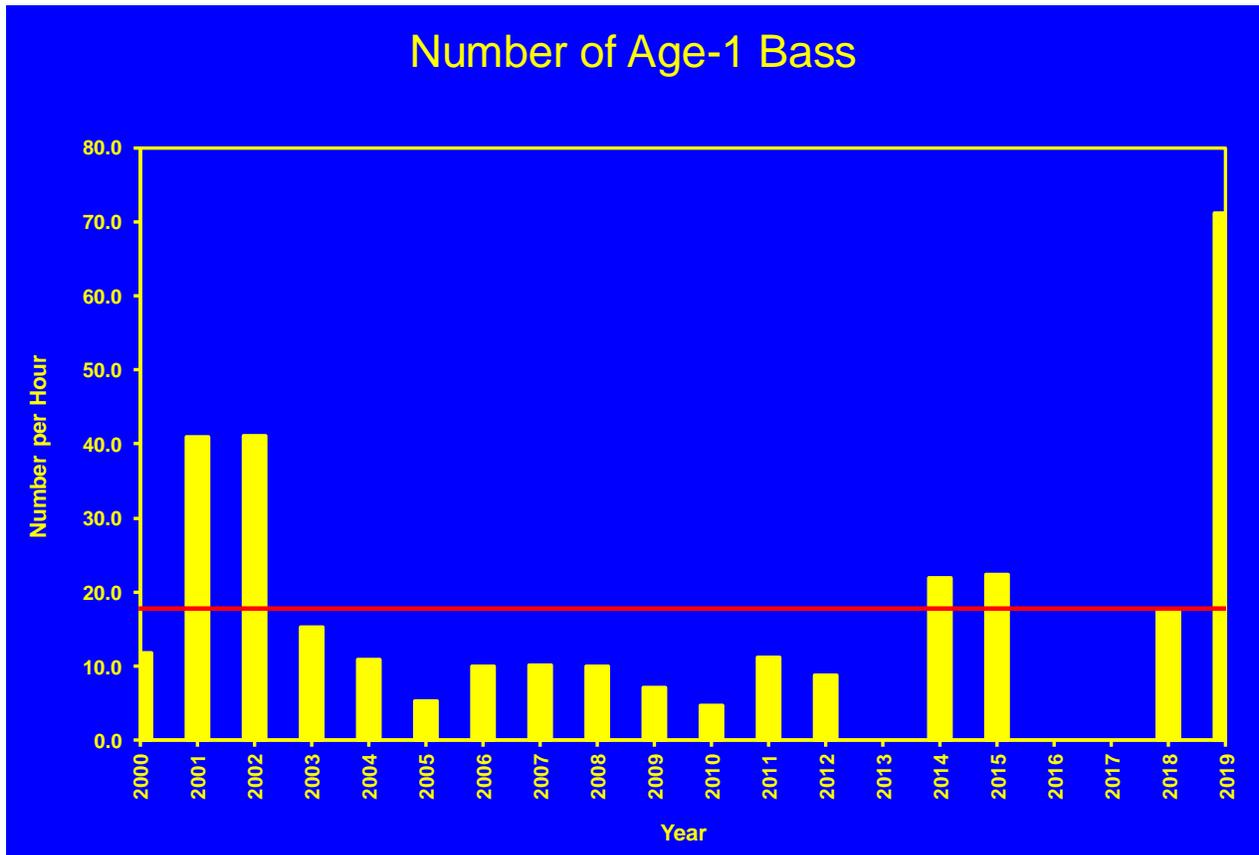
Parameter 1 – Length at age-3 (growth rate)

At Martin's Fork Lake, the length of an age-3 largemouth bass has averaged 12.3 inches since 2000 and receives a rating of "excellent". This parameter decreased from 14.3 inches in 2003 to 10.0 inches in 2015. In the past two years this growth rate has remained at 10.9 showing a fairly stable trend. Although this growth rate is below the long-term average, it is still considered "good" for lakes in this size range. Growth rates are generally related to factors such as population density, food resources, and weather patterns.



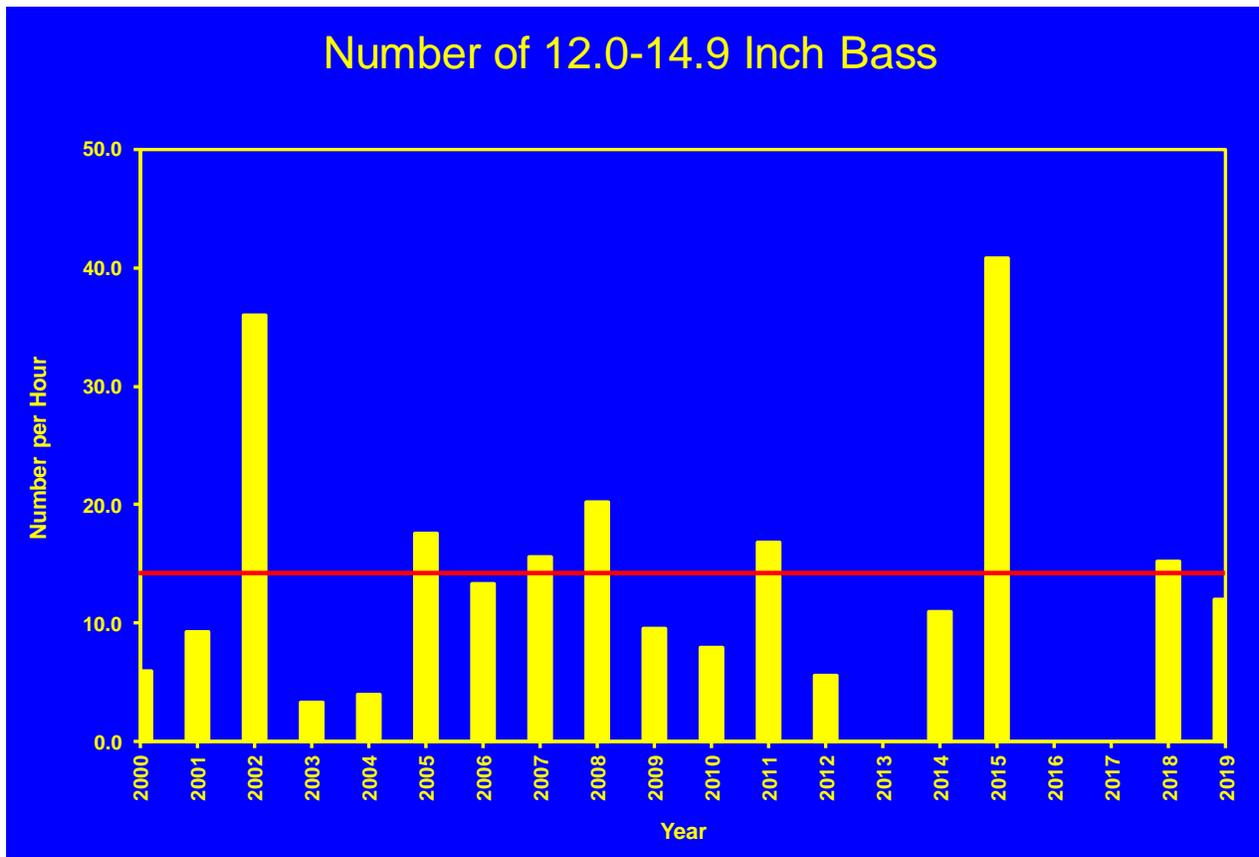
Parameter 2 – Numbers of age-1 bass (how good the spawn was)

KDFWR looks at the electrofishing catch rates of age-1 largemouth bass to assess the success of the spawn which occurred in the prior year. This is an important parameter because the number of bass produced represents how good the fishing will be once these fish grow large enough for anglers to catch. At Martin's Fork Lake, age-1 largemouth bass catch rates have averaged 18.9 fish per hour of electrofishing (red line) since 2000. This is a "fair" age-1 catch rate. This catch rate stayed relatively low through 2012. The low age-1 catch rate is indicative of reduced spawning conditions and/or survival rates to age-1. In the fall of 2011 and 2013 Martins Fork Lake received supplemental stockings of fingerling largemouth bass to assist with recruitment. In 2019, the lake received a spring stocking of advanced fingerlings. The higher catch rate in 2019 was most likely due to this spring stocking. While the low densities of age-1 fish are likely responsible for the excellent growth rates seen here, supplemental stockings will help to stabilize the population and increase angler success in the years to come.



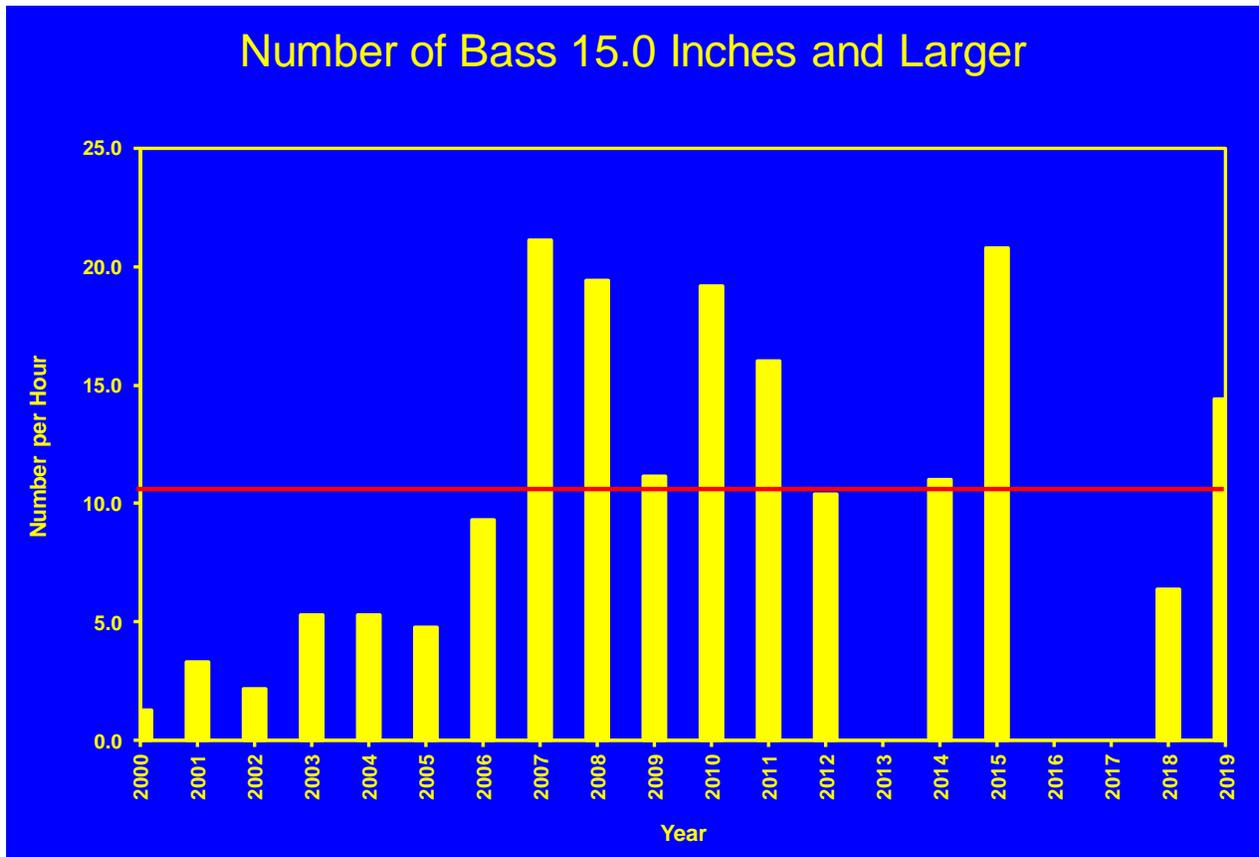
Parameter 3 – Numbers of 12.0-14.9 inch bass

The electrofishing catch rate of 12.0- to 14.9-inch largemouth bass has averaged 14.4 fish/hr (red line) since 2000. This gives Martin's Fork Lake a "fair" rating when compared to other lakes of its size. In most recent years, the catch rates in this parameter have been fairly stable, at or near the long-term average. This is important because these fish have reached the 12.0-inch legal size limit and contribute to harvestable angler catch.



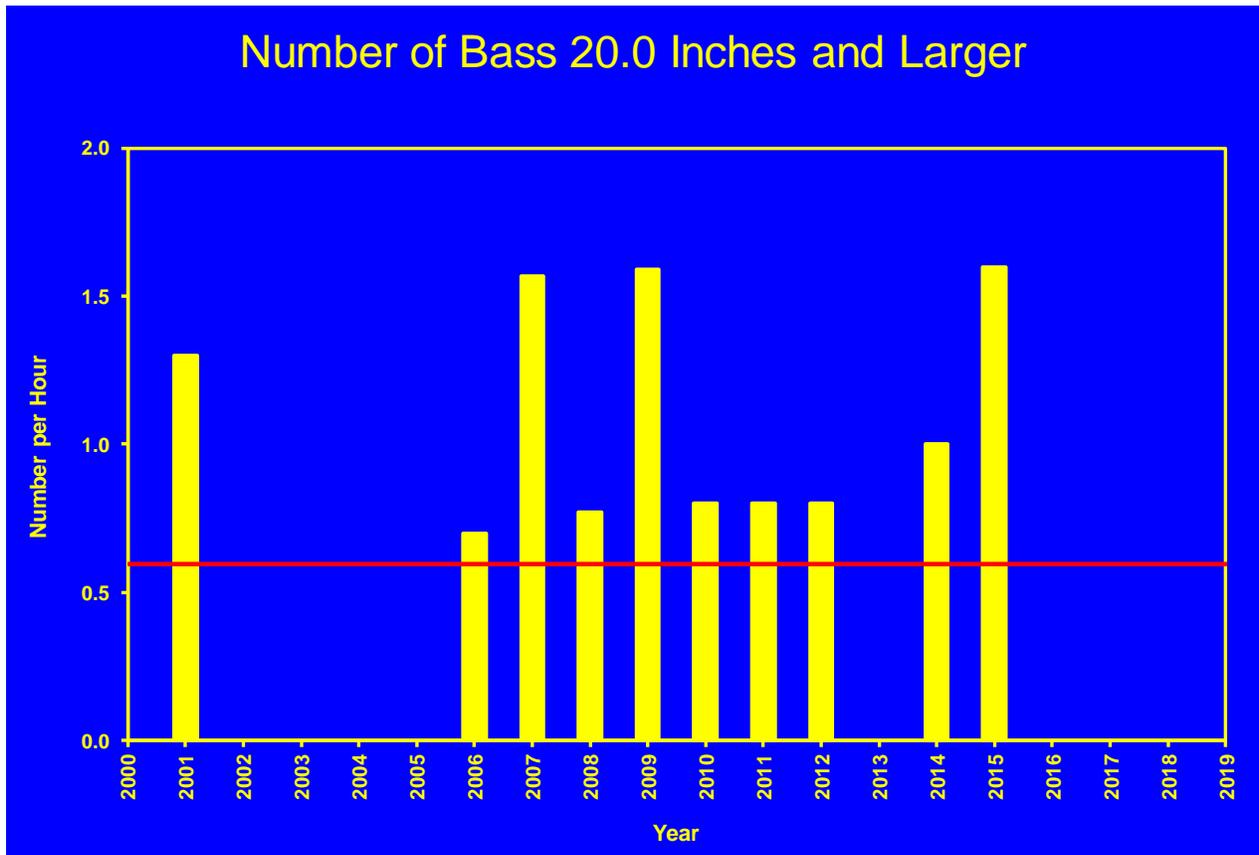
Parameter 4 – Numbers of 15 inch and larger bass

The catch rate of 15.0-inch and larger largemouth bass at Martin's Fork Lake has averaged 10.7 fish per hour (red line) of electrofishing for a long-term rating of "fair". Three of the last four years that data was collected show catch rates above the long-term average. Stronger upcoming year classes and supplemental stockings should continue to show improved numbers. There was no sample data collected in 2013, 2016 or 2017 due to heavy spring rainfalls.



Parameter 5 – Numbers of 20-inch and larger bass

The electrofishing catch rate of 20.0-inch and larger largemouth bass has averaged 0.6 fish per hour at Martin's Fork Lake since 2000. This catch rate gives the lake a "fair" rating when it is compared to other lakes in its size range. Largemouth bass over 20.0 inches have not been collected in the last two years of sampling. There was no sample data collected in 2013, 2016 and 2017. Sampling from 2019 showed good numbers of 15.0-inch and greater fish that should provide reasonable numbers of these larger fish in years to come.



Overall – Total Assessment Score (All five parameters added together)

Overall, the largemouth bass fishery at Martin’s Fork Lake has averaged a “fair” rating (11) since 2000 (red line). This largemouth bass population has remained fairly stable for the last 20 years. Compared to similar lakes across the state, catch rates for all sizes of largemouth are slightly below average. Occasional, supplemental stockings of fingerlings, have helped keep numbers from falling lower in years of poor natural reproduction. In the future, if the trend of poor reproduction continues, Martin’s Fork Lake will likely require more supplemental largemouth bass stockings. Increased efforts to improve summer and winter habitat (brush and trees) will likely help boost natural recruitment as well.

